

NEOTROPICAL TINEIDAE, III: THE GEOGRAPHICAL ORIGINS
AND SYSTEMATIC RELATIONSHIPS OF TWO SPECIES
QUESTIONABLY ATTRIBUTED TO THE
AMERICAS (LEPIDOPTERA)

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Abstract.—Two species of tineid moths previously described by Edward Meyrick and considered by him as introductions into England from either North or South America are re-examined and illustrated. One of these, *Metarsiora horrealis* Meyrick is now considered a junior synonym of the southern European *Ateliotum insulare* (Rebel). On the basis of subsequently collected specimens, a Neotropical origin of the second species, *Opogona antistacta* Meyrick, is hereby confirmed. The adults and male genitalia are illustrated for both species as well as the male pupa of *O. antistacta*.

In 1937, Edward Meyrick described two species of Tineidae from unique specimens collected in London warehouses that contained imported plant material. For different reasons, Meyrick believed both specimens were introductions from either North or South America. In the course of my studies on the Neotropical Tineidae, it has been necessary to re-examine these two problematical species.

Metarsiora horrealis (Figs. 1, 3) was originally thought by Meyrick to be of the "American type" and was collected at a site where nuts from North and South America were stored. An Old World origin for the species was correctly shown by Bradley (1966: 216) when he synonymized this taxon under *Ateliotum insulare* Rebel, a species known from the Canary Islands and Sicily. Although this synonymy was repeated in the British Check List (Bradley et al., 1972), Zagulajev (1975) did not list *Metarsiora horrealis* in his revision of the Myrmecozelinae. A complete synonymy of *Ateliotum insulare* follows.

Ateliotum Zeller

Ateliotum Zeller, 1839: 189 (type species: *Ateliotum hungaricellum* Zeller, 1839).

Dysmasia Herrich-Schäffer, 1853: vol. 5: 23 (type species: *Dysmasia petrinella* Herrich-Schäffer, 1853).

Hyoprora Meyrick, 1908: 754 (type species: *Hyoprora crymodes* Meyrick, 1908).

Hylophygas Meyrick, 1932: 119 (type species: *Hylophygas convicta* Meyrick, 1932).

Saridocompsa Meyrick, 1937: 112 (type species: *Saridocompsa cypellias* Meyrick, 1937).

Metarsiora Meyrick, 1937: 76 (type species: *Metarsiora horrealis* Meyrick, 1937).



Figs. 1-2. Adults. 1, *Ateliotum insulare* (♂ holotype of *Metarsiora horrealis*), length of forewing 4.8 mm. 2, *Opogona antistacta*, ♂ holotype, length of forewing 6.2 mm.

***Ateliotum insulare* (Rebel)**

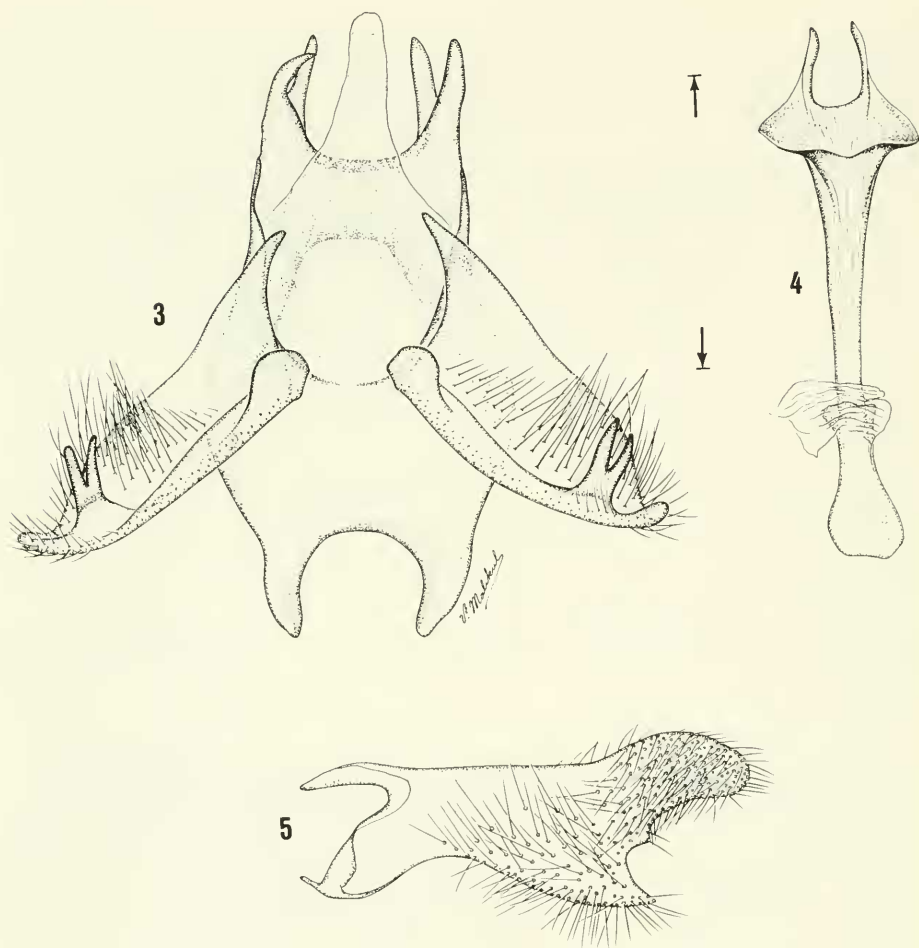
Figs. 1, 3-4

Dysmasia insularis Rebel, 1896: 125.—Rebel in Standinger and Rebel, 1901 (pt. 2): 241.—Caradja, 1920: 172.

Ateliotum insulare (Rebel).—Petersen, 1957: 561.—Zagulajev, 1975: 229.

Ateliotum insularis (Rebel).—Bradley, 1966: 216.—Bradley, Fletcher, and Whalley, 1972: 7.

Metarsiora horrealis Meyrick, 1937: 76.—Bradley, 1966: 216 (synonym of *Ateliotum insulare* (Rebel)).—Bradley, Fletcher, and Whalley, 1972: 7.



Figs. 3-5. Male genitalia. 3, *Ateliotum insulare*, ventral view, scale = 0.25 mm. 4, Same, aedeagus. 5, *Opogona antistacta*, lateral view of valva.

A few corrections should be noted in Meyrick's description of *M. horrealis*. An antennal pecten consisting of at least 4-6 brown hairs is present in contrast to his statement that a pecten is absent. Similarly, he reports the haustellum absent which should be checked in a cleared specimen, because Zagulajev (1975: fig. 127) shows both a reduced haustellum and maxillary palpus present in *Ateliotum hungaricellum* Zeller. Meyrick also stated that all veins are present in the forewing when in fact one radial vein is lacking as shown by Zagulajev (1975: fig. 151a).

Opogona antistacta Meyrick

Figs. 2, 5-11

Opogona antistacta Meyrick, 1937: 87.

Opogona antistacta was reared from a larva found in London feeding under a slight tubular web on banana rind. The unique male holotype is lacking an abdomen, which has cast some uncertainty on its identity. One key feature in the

forewing pattern of the holotype is the presence of a pair of small subapical fuscous spots (Fig. 2) which are also present in three male specimens believed originally from the circum-Caribbean area. Two were intercepted at ports in the United States (Baltimore and Philadelphia), with one specimen suspected to have originated from Colombia and the other from Cuba (on banana rubbish). A third specimen was collected and reared in Cuba on sugar cane. The genitalia of all three are identical. Because this species is now believed to be indigenous to the Neotropical region and its identity previously in doubt, a full description is warranted.

Adult (Fig. 2).—Length of forewing: ♂ 4–6.2 mm. A small, buff to light brown moth with a pair of minute, rather faint, fuscous subapical spots, one on costa and the other approximately opposite on termen. Female unknown.

Head: Vestiture smooth; scales of vertex light brown, projected forward as a round ridge extending between antennal bases; scales darker brown posterior to ridge; frons beneath vertex ridge with a double row of white scales forming a skirt-like fringe above mouthparts. Antenna approximately 0.8 the length of forewing, 70-segmented; scape smooth, elongate and slightly depressed, light brown, pecten absent; flagellum smooth, light brown streaked with fuscous; a single row of scales completely encircling each segment; ventral sensory setae reduced. Maxillary palpus moderately short, not extending to apex of labial palpus II, buff to cream; haustellum reduced, slightly exceeding length of maxillary palpus. Labial palpus 3-segmented, elongate, dark brown laterally, cream ventrally; 4–5 slender buff hairs arising laterally from segment II; apical segment relatively broad and flat.

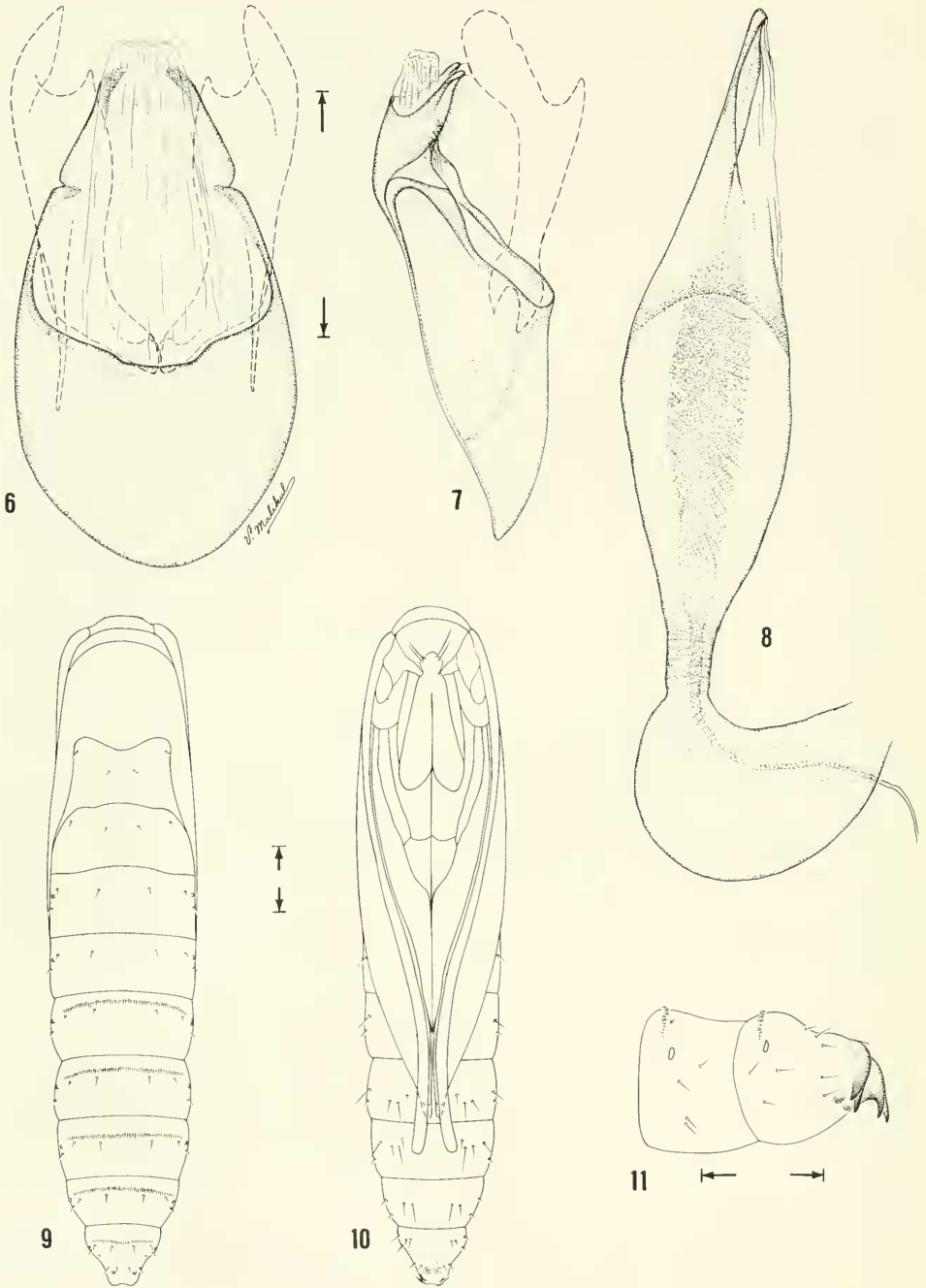
Thorax: Pronotum light brown. Venter silvery white to cream. Forewings mostly light brown with suffusion of darker brown scales over distal two thirds; a small, rather indistinct fuscous spot at subapex of costa; a similar even smaller spot present at same level on subapex of termen; fringe consisting of very fine buff hairs. Hindwing uniformly pale buff with a slight golden luster; fringe elongate, approximately twice the greatest width of wing. Foreleg cream to buff ventrally, dark fuscous dorsally with apices of tibia and tarsal segments ringed with buff. Midleg similarly marked as foreleg but generally paler and irrorated with buff dorsally. Hindleg uniformly buff to cream.

Abdomen: Light brown dorsally, cream to pale buff ventrally.

Male genitalia: As shown in Figs. 5–8. Uncus fused to tegumen, bifid with lobes widely separated and only slightly setigerous. Tegumen a moderately narrow band dorsally. Vinculum long and broad, with anterior margin broadly rounded. Valva constricted near base, then becoming gradually wider toward broadly excavated outer margin; ventral margin of valva produced into a sharp lobe. Aedeagus elongate conical, with a grooved apex; cornuti absent.

Larva.—Unknown.

Male pupa (Figs. 9–11).—Length 5.5 mm; maximum width 1.3 mm. Color (dried exuvium) light brown. Head round, with reduced frontal process (cocoon cutter). Labial palpus elongate, extending nearly to T3; caudal end broadened. Forewing extending to A5. Antenna to middle of A5. A single anterior row of minute dorsal spines present on A3–7; tabulation of dorsal spines as follows: A3 = 67, A4 = 64, A5 = 65, A6 = 62, A7 = 57. Cremaster composed of a pair of stout, bifurcate, ventral spines from end of terminal segment. Caudal spines absent from dorsum of A8 + 10.



Figs. 6–11. *Opogona antistacta*. 6, Male genitalia, ventral view, scale = 0.25 mm. 7, Lateral view. 8, Aedeagus. 9, Male pupa, dorsal view, scale = 0.5 mm. 10, Dorsal view. 11, Caudal end with cremaster, lateral view, scale = 0.5 mm.

The pupal illustration is a reconstruction of the shell after adult emergence. Consequently, I am uncertain as to the precise shape of the vertex. Because few pupae of *Opogona* have been illustrated, I am also uncertain of the diagnostic features of this stage. Comparisons with that figured for *O. omoscopia* Meyrick (Davis, 1978: 18) show the structure of the cremaster to differ greatly. In *O. antistacta*, the cremaster is ventral (versus dorsal in *omoscopia*) and consists of two sets of spines (versus simple).

Holotype.—♂, BMNH.

Type locality.—London, England [presumed imported from Latin America].

Distribution.—Probably circum-Caribbean. This species is apparently a minor pest on stored plant material, especially banana and sugarcane.

Material examined.—4 ♂ and 1 ♀ pupa. ENGLAND: London: 1 ♂ (holotype), 8 Sept. 1936, S. Wakely (BMNH). CUBA: Camaquey Prov.: Central Jaronú: 1 ♂ with pupal exuvium, 5 May 1927 (USNM). UNITED STATES: Maryland: Baltimore [intercepted on a ship from Colombia]: 1 ♂, Jan. 1936 (USNM). Pennsylvania: Philadelphia [intercepted on banana refuse from Cuba]: 1 ♂, 21 May 1928 (USNM).

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LITERATURE CITED

- Bradley, J. D. 1966. Some changes in the nomenclature of British Lepidoptera, part 4. *Entomologist's Gazette* 17: 213–235.
- Bradley, J. D., D. S. Fletcher, and P. E. S. Whalley. 1972. In Kloet, G. S. and Hincks, W. D., eds., *A check list of British insects, pt. 2: Lepidoptera*. viii + 153 pp.
- Caradja, A. 1920. Beitrag zur Kenntnis der geographischen Verbreitung der Microlepidopteren des palaearctischen Faunengebietes nebst Beschreibung neuer Formen. III. *Iris* 34: 75–179.
- Davis, D. R. 1978. The North American moths of the genera *Phaeoses*, *Opogona*, and *Oinophila*, with a discussion of their supergeneric affinities (Lepidoptera: Tineidae). *Smithsonian Contributions to Zoology*, No. 282 pp. 1–39.
- Herrich-Schäffer, G. A. W. 1843–1856. *Systematische Bearbeitung der Schmetterlinge von Europa*, zugleich als Text, Revision und Supplement zu Jakob Hübner's Sammlung europäischer Schmetterlinge, 6 vols. G. J. Manz, Regensburg.
- Meyrick, E. 1908. Descriptions of African Microlepidoptera. *Proceedings of the Zoological Society of London* 48: 716–756.
- . 1932. Entomological expedition to Abyssinia, 1926–1927. Microlepidoptera. *Transactions of the Entomological Society of London* 80: 107–120.
- . 1937. Exotic Microlepidoptera, 5(3–5): 65–160.
- Petersen, G. 1957. Die Genitalien der palaarktischen Tineiden (Lepidoptera: Tineidae). *Beiträge zur Entomologie* 7: 557–595.
- Rebel, H. 1896. Dritter Beitrag zur Lepidopterenfauna der Canaren. *Annalen des K. K. Naturhistorischen Hofmuseums* 11: 102–147, pl. 3.
- . 1901. Pp. 1–282, 335–368. In Staudinger, O. and H. Rebel, eds., *Catalog der Lepidopteren des palaearctischen Faunengebietes*. II: Famil. Pyralidae-Micropterygidae. R. Friedlander and Sohn, Berlin.
- Zagulajev, A. K. 1975. *Fauna of the U.S.S.R. Lepidoptera*, vol. 4, No. 5. Tineidae, subfamily Myrmecozelinae, pp. 1–428.
- Zeller, P. 1839. Versuch einer naturgemässen Eintheilung der Schaben, *Tinea*. *Isis* 3: 167–220.